OPTIMIZATION OF PARAMETERS FOR STRUCTURED Umbu FRUIT PRODUCTION

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Umbu is a tropical fruit of the genus Spondias tuberosa. Structured fruit, with high concentration of fruit pulp and texturezing agents is a good alternative to the industrial utilization of this fruit. This study aimed to optimize the parameters for structuring umbu and evaluate their acceptability. Assays were performed using a $2^3$ full factorial design with three central points and six axial, resulting in 17 trials, having as independent variables the concentration of alginate, pectin and gelatin, as responses texture (g), color difference $\Delta E$ (L *, a * and b *), soluble solids, pH and Aw. The trials 8 and 12 showed the higher values for structured firmness 169.00 g and 163.00 g, respectively. Gelatin was the hydrocolloid that had the greatest influence on the strength of the structure, followed by pectin. The pH of the structured umbu ranged from 3.47 to 3.86 and also had a greater influence by the hydrocolloid gelatin. The concentration of hydrocolloids does not influence the soluble solids, the water activity, nor the $\triangle E$ of the products. Of the three formulations evaluated in emotional test of acceptance was observed that samples 327 and 385, corresponding to trials 7 and 8 showed good acceptability, exceeding 70% by almost all the attributes (color, taste, texture and overall evaluation) only the aroma was described by participants as unattractive. These formulations showed good physical-chemical, microbiological and chemical composition, thus presenting itself as an innovative alternative to the use of umbu in a new product that has good technological feasibility.